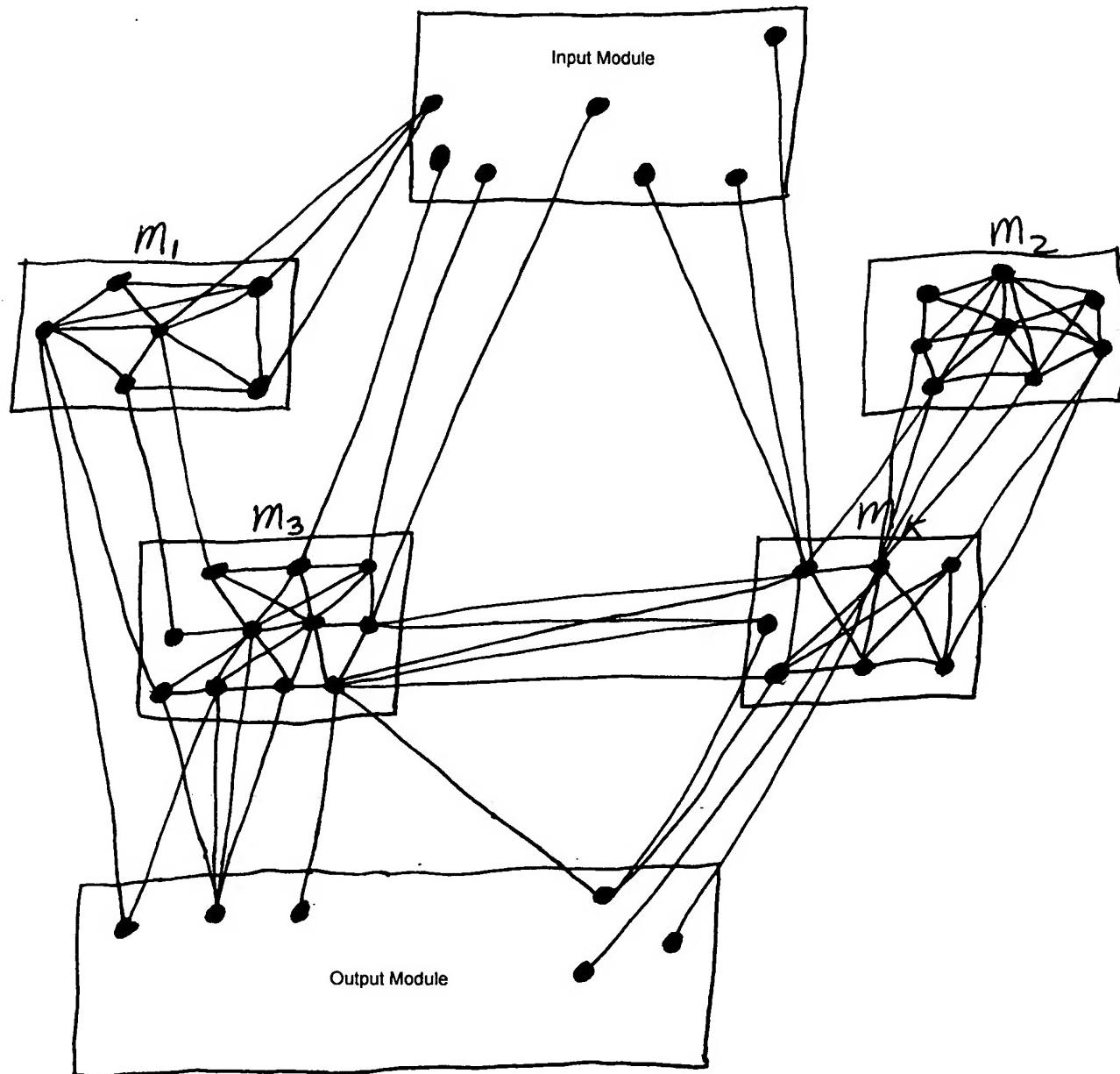




Figure 1

Effector Machine Structure used in Cyclic Graph Evolution



Internal modules are labeled: $m_1, m_2, m_3, \dots, m_k$

Internal connections lie completely within one rectangle, which represents one module. Non-zero external connections run from one module to another module. Effectors that have non-zero external connections to other modules are shown as large dots.

Figure 2
CGE Crossover

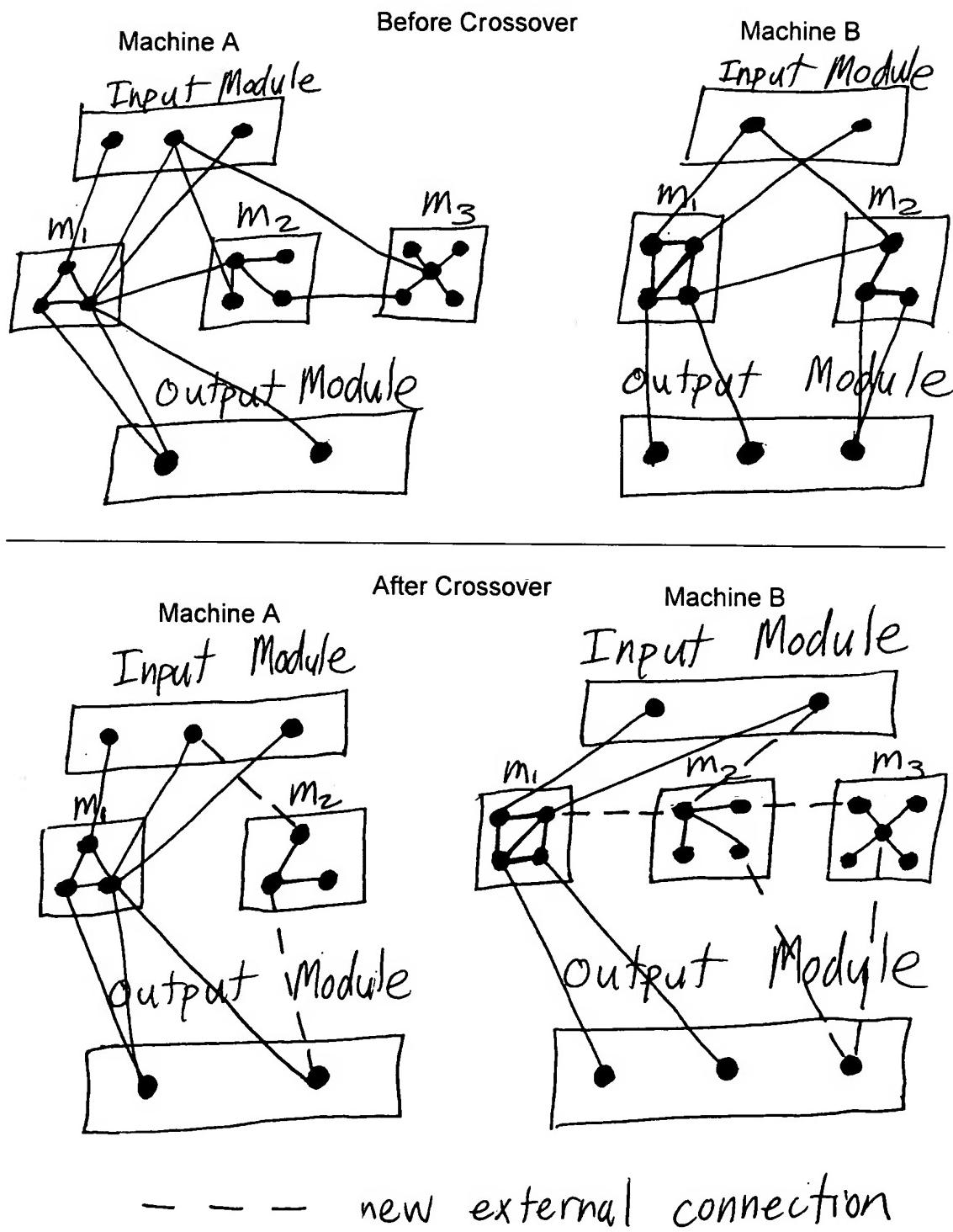
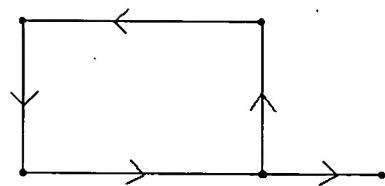


Figure 3

Directed Graphs

Cycle



No Cycle

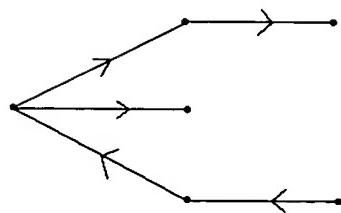
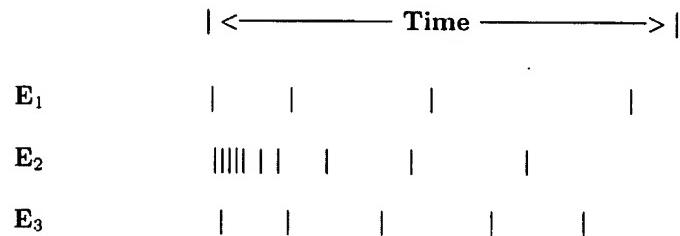


FIGURE 4
ERROR TOLERANCE IN EFFECTORS

EFFECTOR FIRING TIMES



Effector Circuit

Figure 5

